

Arkansas Maternal Health Community of Practice



**General Meeting
November 21, 2024**



Welcome

Please introduce yourself in the chat:

Name

Organization

Agenda

12:00	Welcome <i>William Greenfield, MD</i>
12:05	Governor's Maternal Health Strategic Committee Report <i>Kay Chandler, MD, Arkansas Surgeon General</i> <i>Cassie Cochran, MPH Deputy Director for Public Health Programs</i>
12:30	Questions
12:40	Arkansas Maternal Health Scorecard <i>Jennifer Callaghan-Koru, PhD, MHS, Associate Professor & Director of the PRIMROSE Program,</i> <i>and Güneş Koru, Professor & Director of the Office of Public Health Informatics, UAMS</i>
1:00	Questions
1:10	Update on Priority Setting and Closing Remarks <i>Zenobia Harris, DNP</i>
1:30	Adjourn



Governor's Maternal Health Strategic Committee Report

Kay Chandler, MD

Arkansas Surgeon General

Cassie Cochran, MPH

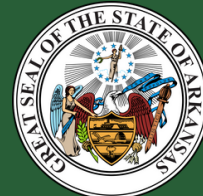
Deputy Director for Public Health Programs

HEALTHY MOMS HEALTHY BABIES

STRATEGIC COMMITTEE FOR MATERNAL HEALTH



Maternal Health Working Group
Statewide Strategic Maternal Health Plan



Overview

In March 2024, Governor Sarah Huckabee Sanders signed an Executive Order to improve maternal and infant health. Over 100 stakeholders collaborated on priorities including data, transportation, substance use treatment, maternity care, contraception access, education, and healthcare access.

Four subgroups formed in April, meeting over 20 times to develop a roadmap, with monthly input from the Strategic Committee for Maternal Health. Immediate actions were directed to address critical needs statewide.



Progress Report

COMPLETED ACTIVITIES

Stakeholder Meetings in Pilot Counties

Conducted ADH-led stakeholder meetings across five pilot counties to coordinate maternal health initiatives.

(Polk, Scott, Garland, Crittenden, and Phillips)

Medicaid Process Reviews

Completed reviews for onboarding, renewals, billing, and federal marketplace transitions, enhancing Medicaid services for maternal health.

Mobile Maternal Units Pilot

Launched with UAMS in Madison and Ashley counties; exploring expansion to Phillips and Scott counties to increase maternal health access.

Home Visiting Services Expansion

Partnered with Arkansas Children's Hospital for services in four counties; exploring potential expansion to all pilot locations.



Progress Report

COMPLETED ACTIVITIES

Clinical Process Updates

Updated local health units on pregnancy testing, WIC, and maternity care processes to improve maternal care standards.

Grant Partnerships

Partnered with the University of Arkansas and Community Clinic on grants targeting obstetric outcomes and cardiovascular care.

Contraception Education Funding

Secured ADH funding to promote contraception education and patient-centered counseling for maternal health.

Maternal Health Indicators Dashboard

Developing an ADH dashboard draft to track health indicators in pilot counties, supporting data-driven decision-making.

Community Health Worker Grant

Partnered with UAMS to secure funding for community health workers in pilot locations, boosting local maternal health support.





Progress Report

ONGOING AND PLANNED ACTIVITIES

Transforming Maternal Health Grant
Developing a CMS grant application for the Transforming Maternal Health Model, due September 20, 2024.

St. Bernard's Satellite OB Clinics
Coordinating with St. Bernard's to educate partners about new satellite OB clinics in east Arkansas.

DHS Staff Support on Maternity Clinic Days
Planning for DHS staff presence at local health units to assist with Medicaid applications and reproductive health questions.

Church Partnership for Maternal Support
Partnering with the Church of Jesus Christ of Latter-Day Saints on a pilot program for childcare and maternal support.

Baby2Baby Program Exploration
Exploring Baby2Baby to provide essential care items for mothers and infants in pilot counties.

Arkansas Perinatal Quality Collaborative
Promoting maternal safety in birthing hospitals, focusing on reducing primary cesareans and developing protocols for congenital syphilis prevention.



Committee Recommendations

1. Data, Reporting, and Technology

Focus: Improve maternal health tracking and service access.

- **Recommendations:**
 - **Develop maternal health and Medicaid eligibility dashboards.**
 - **Create a mobile-friendly portal for all maternal health resources.**
 - **Reform Medicaid payments to improve appointment tracking.**
 - **Explore tech advancements in maternal care.**
- **Activities:**
 - **Drafted pilot county dashboard; adapting DHS tracking for Medicaid applications.**

2. Healthcare Access and Medicaid

Focus: Ensure accessible coverage and care for pregnant women.

- **Recommendations:**
 - **Evaluate Medicaid reimbursement rates across maternal services.**
 - **Implement presumptive Medicaid eligibility for pregnant women.**
 - **Expand substance use treatment and telehealth options.**
- **Activities:**
 - **TMaH grant application in progress; partnerships for transport and community health workers.**

Committee Recommendations

3. Clinical and Practice Improvements

Focus: Modernize maternal care delivery and workforce.

- Recommendations:
 - **Develop Medicaid pathways for doulas, community health workers.**
 - **Expand OB/GYN residencies and midwifery training.**
- Activities:
 - **Researching Medicaid reforms; developing maternal care protocols.**

4. Education and Outreach

Focus: Increase maternal health awareness and education.

- Recommendations:
 - **Launch a maternal health education campaign.**
 - **Create unified “Healthy Moms, Healthy Babies” branding.**
- Activities:
 - **Drafted RFP for media campaign; developed community education tools.**

5. Future Initiatives for Discussion

Focus: Strengthen training and coordination in maternity care.

- Recommendations:
 - **Consider stipends, loan repayment for maternity providers.**
 - **Establish OB Care Coordination and support for small practices.**

Contact Us



Kay Chandler, MD

Surgeon General

kay.chandler@arkansas.gov

Cassie Cochran

Deputy Director for Public Health Programs

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A close-up photograph of a woman holding a newborn baby in a hospital bed. The woman is looking down at the baby with a gentle expression. The baby is lying on its back, wearing a white hospital gown, and appears to be sleeping peacefully. The background is slightly blurred, showing the white frame of the hospital bed. The overall lighting is soft and natural, creating a calm and intimate atmosphere.

Questions?



Arkansas Maternal Health Scorecard

Güneş Koru, PhD, FAMIA

Professor & Director of the Office of Public Health Informatics

Jennifer Callaghan-Koru, PhD, MHS

Associate Professor & Director of the PRIMROSE Program

Project Phases

- Phase 1: Review of existing dashboards
- Phase 2: Collecting stakeholder input
- Phase 3: Prototyping and refining
- Phase 4: Launch



Phase I: **Review of Dashboards**

Published Findings

JOURNAL OF MEDICAL INTERNET RESEARCH

Callaghan-Koru et al

Original Paper

Public Maternal Health Dashboards in the United States: Descriptive Assessment

Jennifer A Callaghan-Koru^{1,2}, MHS, PhD; Paige Newman Chargois³, MPH; Tanvangi Tiwari¹, MPP; Clare C Brown³, MPH, PhD; William Greenfield^{2,4}, MBA, MD; Güneş Koru¹, PhD

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Abstract

Background: Data dashboards have become more widely used for the public communication of health-related data, including in maternal health.

Objective: We aimed to evaluate the content and features of existing publicly available maternal health dashboards in the United States.

Methods: Through systematic searches, we identified 80 publicly available, interactive dashboards presenting US maternal health data. We abstracted and descriptively analyzed the technical features and content of identified dashboards across four areas: (1) scope and origins, (2) technical capabilities, (3) data sources and indicators, and (4) disaggregation capabilities. Where present, we abstracted and qualitatively analyzed dashboard text describing the purpose and intended audience.

Results: Most reviewed dashboards reported state-level data (58/80, 72%) and were hosted on a state health department website (48/80, 60%). Most dashboards reported data from only 1 (33/80, 41%) or 2 (23/80, 29%) data sources. Key indicators, such as the maternal mortality rate (10/80, 12%) and severe maternal morbidity rate (12/80, 15%), were absent from most dashboards. Included dashboards used a range of data visualizations, and most allowed some disaggregation by time (65/80, 81%), geography (65/80, 81%), and race or ethnicity (55/80, 69%). Among dashboards that identified their audience (30/80, 38%), legislators or policy makers and public health agencies or organizations were the most common audiences.

Conclusions: While maternal health dashboards have proliferated, their designs and features are not standard. This assessment of maternal health dashboards in the United States found substantial variation among dashboards, including inconsistent data sources, health indicators, and disaggregation capabilities. Opportunities to strengthen dashboards include integrating a greater number of data sources, increasing disaggregation capabilities, and considering end-user needs in dashboard design.

(*J Med Internet Res* 2024;26:e56804) doi: [10.2196/56804](https://doi.org/10.2196/56804)

KEYWORDS

dashboard; maternal health; data visualization; data communication; perinatal health



Opportunity 1: Integrate Data Sources

- 70% of dashboards reported only 1 or 2 data sources
- Key maternal health data sources (e.g., MMRC, HDD) were absent from >90% of dashboards

Most dashboards were limited to 1 or 2 data sources.

No. data sources	# (%)
One	33 (41.3%)
Two	23 (28.8%)
Three	5 (6.3%)
Four	6 (7.5%)
Five or more	10 (12.5%)
No source stated	3 (3.8%)

Opportunity 2: Increase Disaggregation

- Disaggregation was most common by time interval and geography (e.g., by county)
- Disaggregation by race/ethnicity was possible for some indicators on 55 (69%) dashboards and all indicators on 26 (33% dashboards)

Expanding disaggregation capabilities could increase identification of disparities.

	All indicators # (%)
Time interval	54 (67.5%)
Geography	53 (66.3%)
Race/ethnicity	26 (32.5%)
Mother's age	14 (17.5%)
Insurance type/status	13 (16.3%)
Education	5 (6.3%)

Opportunity 3: Consider Lay User Needs

- Only 10 dashboards (12.5%) identified lay users (e.g., healthcare consumers, community members) as their audience.
- Most dashboards had limited or no textual information about included indicators that would explain the relevance or interpretation for lay users.

Few dashboards identified healthcare consumers as their audience. Textual interpretations of indicators were absent or limited. Many dashboards were difficult to navigate on mobile devices.

Published Findings

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Phase II: **Stakeholder Input**

Gathering Stakeholder Requirements

- Interviewed 35 participants between May and October 2023 using a snowball sampling approach. All participants were maternal health stakeholders in Arkansas, including:
 - Policymakers and Advocates
 - Providers and Administrators
 - Patients and Family Members
 - Researchers
- Participants were asked about what they see important challenges in maternal health in their work/life and how access to publicly available data and information could help them.
- Participants were asked to **describe** the **most important data variables** to include on the site and how they **intended to use** the data.

User Preferences - Visuals

- **Simple, focused, and visual representations of data**

"I like a good graph just because it makes it easy to read, but that's just personally how I navigate that in my head. I don't mind if it's a circle chart—as long as we have an X and a Y axis, I can easily distinguish what the fields are, but I'm much more of a visual person with data." (Participant 9, Physician)

"What I would say is that there [should be] a graphical representation of that data, either bar charts, line charts, maps, things like that, but it needs to be confined to the page. For the section that you're viewing, that information needs to be relevant to that topic or move on...If you give people too much at one time, [people] get confused." (Participant 3, Policymaker)

User Preferences - Comparisons

- **Allow users to select data comparisons**

"I think it would be great to see the comparison between the U.S. as a whole and other states, and I think maybe even the bordering states. States that have similar geographic looks as Arkansas would be great. To compare us to a state like California or New York is not beneficial to us—Mississippi, Texas, Oklahoma, Kansas, those areas are what we're going to look at, want to see."

(Participant 19, Administrator)

User Preferences - Explanations

- **Provide context and explanations**

“If you wanted to present to those who are not [experts] you would need to provide some sort of explanation of what the data is, where it's coming from.” (Participant 11, Policymaker)

User Preferences - Data

- **Provide maternity care access information**

“Where are clinical providers for maternal health located, where are the gaps, and what kind of providers are located there?”

(Participant 5, Researcher)

“Sometimes, it’s hard to keep track of who’s delivering, who’s not delivering, and . . . where these patients are going. That would be useful data to know [about] our patients in Arkansas.” (Participant 19, Administrator)

AMIA 2024 Poster



Investigating Stakeholder Requirements for Publicly Accessible Maternal Health Data

Rachel Purvis,^a PhD, Jennifer Callaghan-Koru,^{a,b} PhD, MHS, Toni Jaudon,^a PhD, Güneş Koru,^c PhD, FAMIA
^aUAMS Department of Health Behavior and Health Education, ^bUAMS Department of Obstetrics and Gynecology, ^cUAMS Department of Health Policy and Management

Objectives

- Describe the design and development of the **Arkansas Maternal Health Scorecard**, which is a state-level maternal health data dashboard.
- Investigate maternal health stakeholders' health and healthcare requirements to inform software development with a focus on usefulness and other software quality attributes that determine technology adoption.

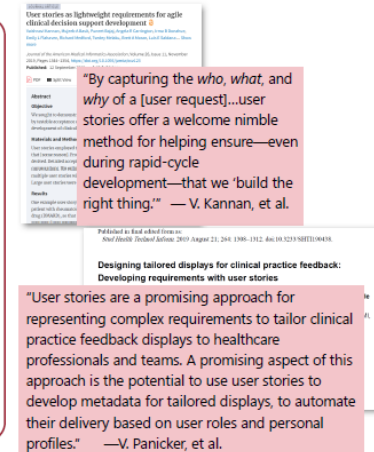
Background

- Arkansas, a rural state with **poor maternal health outcomes**, has among the highest maternal mortality rates and preterm birth rates in the United States.¹
- Broadly publishing data on a healthcare topic like maternal health increases public awareness, knowledge, and transparency on the topic, which can positively impact multiple healthcare initiatives.

Methods

We adopted a qualitative exploratory research approach to understand the data requirements of maternal health stakeholders in Arkansas to inform the development of a state-level maternal health data dashboard.

- Semi-structured interviews** were conducted with 35 stakeholders from May to October 2023.
 - Stakeholders included **policymakers, clinical administrators, government agencies, data providers, researchers, healthcare providers, patients, and family members.**
- Participants were asked about the **challenges and burdensome activities** they repeatedly encountered related to maternal health or healthcare.
 - Participants also described the **data elements** needed to address these issues as well as their preferences for **data presentation and visualizations.**
- Interviews were transcribed and content analysis was performed to elicit **"user stories,"** which is a method to map domain requirements to software requirements.
 - The stories specified actor, data use, and goal (i.e., *"As an [actor], I want to [view...] so that I can [achieve...]"*) and were sorted into themes and sub-themes.
- Using an **iterative process**, the user stories were discussed and consolidated to develop **common characteristics of users**, and their data needs to reach their goals for each identified theme, which then informed the development of dashboard requirements.
 - User stories were also assessed for the **feasibility of implementation** based on access and data use agreements for dashboard development.



Results

We identified 173 unique user stories among six types of users from 35 interviews.

- Twenty** interviews were conducted with healthcare professionals including **providers, policymakers, researchers, and clinical administrators.**
- Twelve** maternity **patients** and **three family members** were also interviewed.
- Participants represented each of the five Arkansas geographical health regions.
- A total of 173 unique user stories were reflected in the data.
- We inductively developed **seven** thematic requirement categories for grouping the user stories, which informed the development of dashboard storyboards.

Table 1. Data requirement categories

User Story Data Requirement Categories	
1	State and county-level indicators
2	Hospital-level outcomes
3	Benchmarking and comparisons
4	Quality improvement indicators
5	Access to maternity care services
6	Maternity care program impact trends
7	Dashboard data accessibility and visualization preferences

Consolidated user stories identifying one or two representative stories that characterized the common user story for each category. User Story Examples

- Participants offered **detailed perspectives** on how publicly accessible maternal health data could be useful to their goals, which provided empirical guidance for our **design and development activities.**
- Consolidated **user stories** provided abstract requirements that highlighted commonalities, which informed **storyboard designs** for the dashboard.
- User stories allowed for the creation of internally parameterized and reused software modules, minimizing the overall software size and **meeting the requirements** expressed in the user stories.

“As a **healthcare professional**, I want to view **maternal health indicators** such as breastfeeding rates, SID rates, and maternal mortality rates so that I can get a **clearer picture of maternal health** in the state. (Participant 14, Policymaker)”

“As a **patient**, I want to find information about **available providers and services** so that I can find a **provider and support services available to me** during and after my pregnancy. (Participant 42, Patient)”

Conclusion

- Researchers aside, most stakeholders were goal-oriented and wanted to directly and quickly access data on multiple devices, including smartphones.
- We adopted a storyboarding style in user interface design that presents a proper story with a few configuration and query options by considering smaller devices.
- The user interfaces will allow choosing stakeholder types to present the most relevant stories and configuration levels.

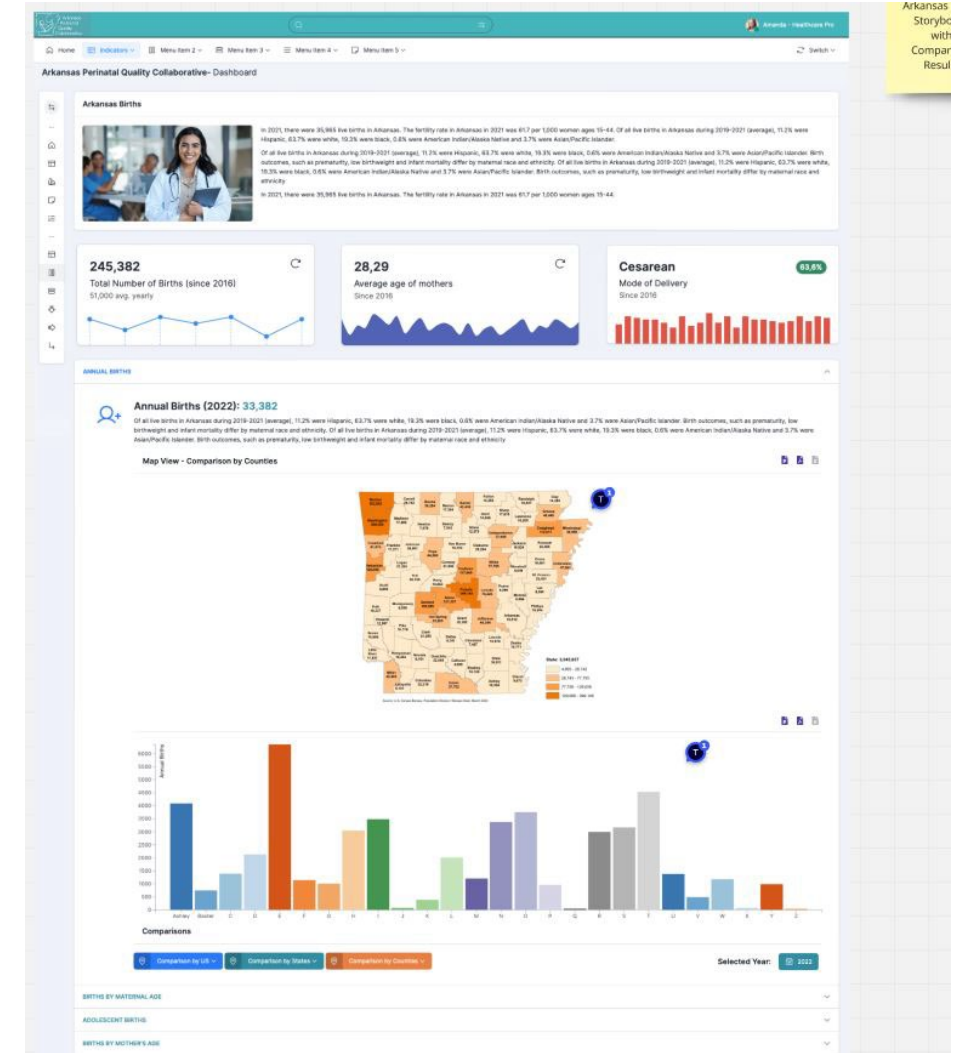
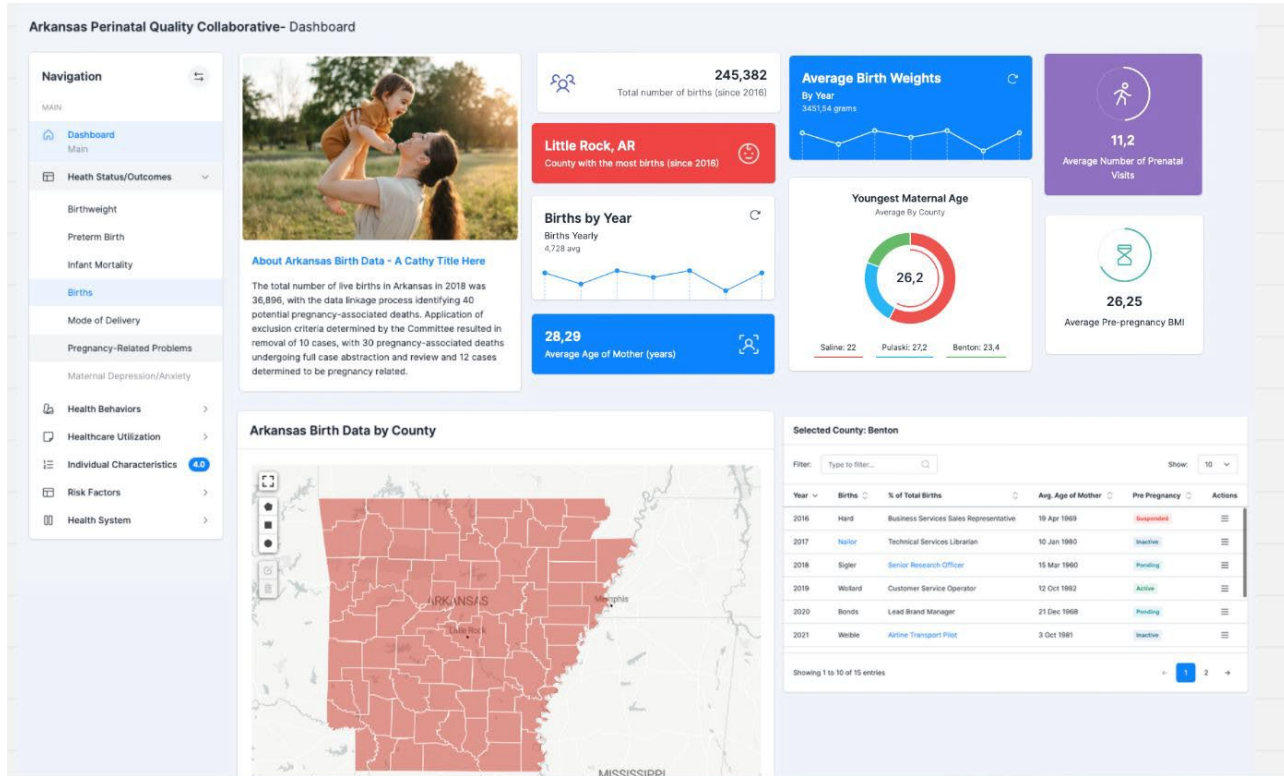


Phase III: **Prototyping and Refining**

Guiding Informatics Principles

- Ease of comprehension
- Ease of use
- Storyboarding approach
- Customizability
- Performance

Iterative Prototyping



Arkansas Storybc with Compar Resul

Piloting & Feedback

ARKANSAS MATERNAL HEALTH SCORECARD

Pregnancy Risk Assessment Monitoring System

Factors such as nutrition, substance use, mental and physical stress, and other socioeconomic factors impact maternal health. The Pregnancy Risk Assessment Monitoring System (PRAMS) is an annual survey of postpartum women designed to measure these factors in each state and to identify groups of women and children at high risk for health problems.

[Explore the Data](#)

Pregnancy Intention

Intended, Mistimed, Unwanted, Unsure

Depression in the Perinatal Period

24.6%

Year	Rate (%)
2018	~18.5
2019	~20.5
2020	~19.5
2021	24.6

2.7%

Women who experienced Intimate Partner Violence during perinatal period (2021)

Participants in the video conference:

- Rachel Purvis
- Claudia U De Guillen
- Philmar Mendoza Kabua
- Emri
- Altay Genç | 3!
- Altay Genç | 3!
- Türkyay PALANCI | ...
- Türkyay PALANCI | 3!
- Yolani L Elbon
- Yolani L Elbon
- Tanvangi Tiwari (s...
- VictorMary
- VictorMary
- Mariacela Sandoval

Why a Scorecard?

- “Scorecard” reflects the expanded explanations the site includes about data sources, indicators, and their significance
- “Scorecard” avoids confusion with dashboards and data sites that may be published by the state and other organizations



Phase IV: **Launch**

Arkansas Maternal Health Scorecard

ARKANSAS MATERNAL HEALTH SCORECARD

What is the Arkansas Maternal Health Scorecard?

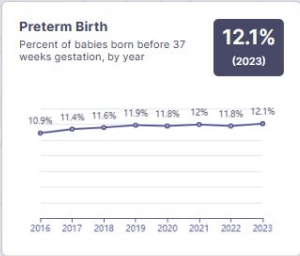
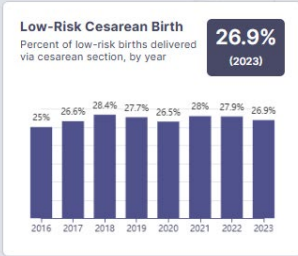
The Arkansas Maternal Health Scorecard includes key metrics that can track state progress towards ensuring the wellbeing of mothers during pregnancy, birth, and the postpartum period.

[Learn more](#)

Arkansas Births

In 2023, over 35,000 babies were born in Arkansas. Birth certificate data are comprehensive of all births in the state and provide information on select risk factors in pregnancy, obstetric procedures, and maternal and newborn outcomes.

[Explore the data](#)



Example use cases for the Scorecard

- What percentage of pregnant women in Arkansas start prenatal care in the first trimester, and how does this compare to neighboring states?
- What is severe maternal morbidity and how common is it in Arkansas?
- Have smoking rates during pregnancy improved in Arkansas? Are they better or worse than neighboring states?
- Which Arkansas counties lack access to maternity care and where have hospitals closed obstetric services?



Updates from the CoP

CoP Meeting Information



UAMS Health Jobs Giving

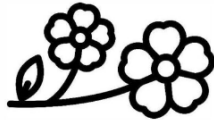
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The PRIMROSE Project



Transforming maternal care in Arkansas

Arkansas has among the highest rates of maternal mortality, pre-term birth, and low birth weight in the US. The **Pe**rinatal **IMp**rovement of **O**utcomes and **S**afety for **E**veryone (**PRIMROSE**) project partners with stakeholders on core activities, described below, to contribute to reducing maternal morbidity and mortality in Arkansas and improve the state's national ranking for maternal health.

The primrose is a native wildflower commonly seen across Arkansas, and its name derives from the Latin word "primus," because it is one of the first flowers to bloom in Spring. Healthy birth is also a "prime" requirement for a healthy population, and the PRIMROSE acronym emphasizes the foundational importance of perinatal health for the state of Arkansas.

Community of Practice Presentations

[AR MHCop Presentation 18May2023](#) [Download](#)

[AR MHCop Presentation 17August2023](#) [Download](#)

[AR MHCop Presentation 16November2023](#) [Download](#)

[AR MHCop Presentation 8February2024](#) [Download](#)

[AR MHCop 2024 Spring Forum Summary](#) [Download](#)

[AR MHCop Presentation 29August2024](#) [Download](#)

Update on Priority Setting

- Required plan submitted to HRSA on September 29
- Preparing to publish the final results of the priority setting process on the PRIMROSE website

Closing Remarks

- Open invitation to present at future MHCoP meetings
- Please share about new projects, resources, and opportunities related to maternal health in Arkansas



Thank you!

Our next meeting will be *virtual via Zoom* on
February 27, 2025, at noon.

If any organizations have maternal health information that they would like to present at future meetings, please email Rachel Purvis at **rspurvis@uams.edu**.